

23. *ZINGIBER ROSEUM* (ROXB.) ROSCOE – AN ADDITION TO THE FLORA OF MAHARASHTRA, KARNATAKA, AND GOA (INDIA)

ARUN N. CHANDORE^{1,2}, NILESH V. MALPURI^{1,3} AND S.R. YADAV^{1,4}

¹Department of Botany, Shivaji University, Kolhapur 416 004, Maharashtra, India.

²Email: arunchandore@gmail.com

³Email: nmulpuri@rediffmail.com

⁴Email: sryadavdu@rediffmail.com

Introduction

Genus *Zingiber* Mill. (Zingiberaceae) is represented by 141 species (Theilade 1999; Theilade and Mood 1999) distributed mainly in tropical Asia. Six species have been reported from Maharashtra (Sharma *et al.* 1996), 8 in Karnataka (Sharma *et al.* 1984; Bhat 1993), and 4 in Goa (Rao 1986). Sabu (2006) recently revised the Zingiberaceae of southern India and reported 7 species of *Zingiber* to occur in the northern Western Ghats.

During our survey of the Northern Western Ghats, *Zingiber roseum* (Roxb.) Roscoe was collected from three sites, namely Belgaum district (Karnataka), Sindhudurg district (Maharashtra), and North Goa district (Goa). This species is a new record for the Northern Western Ghats and for the three states, namely Maharashtra, Karnataka, and Goa. The voucher specimens of the species were deposited at the herbarium of the Botany Department of Shivaji University, Kolhapur (SUK).

Zingiber roseum (Roxb.) Roscoe, Trans. Linn. Soc. London 8: 348. 1807; Roxb., Asiatic Res. 11: 347. 1810, Fl. Indica 1: 49. 1820; Baker in Hook. f., Fl. Brit. India 6: 244. 1892; K. Schum. in Engler, Pflanzenr. 4(46): 184. 1904; C. E.C. Fisch. in Gamble, Fl. Madras 8: 1489. 1928; Manilal, Fl. Silent Valley 314. 1988; M. Sabu, Zingiberaceae & Costaceae of South India, 244. 2006. *Amomum roseum* Roxb., Pl. Coast Coromandel 2: 15 pl. 126. 1800.

Rhizome thick, fleshy white to pale yellow within; roots many, fleshy. Leaf shoot c. 1.2 m tall, basal portion enclosed by long sheaths. Leaves short, petiolate; ligule bilobed, c. 1.8 cm long, membranous; lamina c. 25 x 8 cm, oblong-lanceolate, tip acuminate, base rounded, lower surface pubescent, upper surface glabrous. Inflorescence produced directly from the rhizome, almost buried in the soil; peduncle very short or absent; spike c. 5 cm long, oblong, dense. Bracts

c. 5 cm long, broadly ovate, closely imbricating, red. Bracteole shorter than the bracts, linear-lanceolate, slightly notched at the tip, sparsely hairy. Flower c. 3 cm long, pale yellow. Calyx tubular, membranous, tip slightly toothed. Corolla tube longer than the bracts, c. 5 cm long, white, segments subequal, red; dorsal lobe 2.5 cm long, recurved; lateral lobes smaller, linear. Labellum shorter than the corolla lobes, oblong-cuneate, slightly three-lobed, margin recurved, crisp, white, sometime with yellow markings on side lobes. Lateral staminodes very small, rounded yellow. Anther sessile; thecae c. 1 cm long; crest c. 7 mm long. Style long, filiform, stigma ciliate. Epigynous glands small, free from each other. Ovary 4 mm long, pubescent. Capsule ovoid-elliptic, red trigonous; seed black, c. 6 mm long.

Fl. & Fr.: July–October.

Specimen Examined: Karnataka: Belgaum- Amgaon and Kankumbi. ANC-774. Maharashtra: Sindhudurg- Amboli. ANC-1271. Goa: North Goa- Chorla Ghat. ANC-811.

Note: This species can be distinguished by its lateral spike, from the base of leafy stem; peduncle very short or absent; labellum white or with yellow markings. The species prefers evergreen forests at high altitude, growing in association with *Costus speciosus* (Koenig) Smith. The plants were planted in the botanic garden of the Department of Botany, Shivaji University, Kolhapur.

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24. *AERIDES ROSEA* LODD. EX LINDL. & PAXTON (ORCHIDACEAE) – A NEW RECORD FROM THE ANDAMAN AND NICOBAR ISLANDS, INDIA

SARAT MISRA¹, P.K. NAYAK^{2,3} AND S.P. PANDA^{2,4}

¹Orchid Study Centre, C-89 HIG, Baramunda H.B. Colony, Bhubaneswar 751 015, Odisha, India. Email: esmisra@yahoo.com

²Office of the PCCF and CWLW, Nilakantha Nagar, Bhubaneswar 751 015, Odisha, India.

³Email: wildlifecorissa@gmail.com

⁴Email: situ.1979@gmail.com

The Andaman and Nicobar Islands in India is a repository of diverse plant species, including 125 species of orchids of which 25 species are endemic to this group of islands (Singh *et al.* 2003). There are 47 plant species on these islands, which do not occur on mainland India.

During a cursory visit to the middle Andamans in February 2009, an epiphytic orchid was collected from the beach forest of the Vandoor Marine Park. The habit of this species resembled *Aerides multiflora* Roxb., except that the inflorescence (of the previous year) of this plant was arched, not pendulous, as in the latter species. This plant flowered under cultivation in the orchidarium of the Regional Plant Resource Centre (RPRC) at Bhubaneswar during April 2010 and May 2011. It was identified as *Aerides rosea* Lodd. ex Lindl. & Paxton, popularly known as Fox Brush plant. *Aerides rosea* is known to occur in mainland India, but not from the Bay Islands. The scientific illustration (Fig. 1a–k and Fig. 2a–c) along with morphological description for this species is provided here.

Aerides rosea Lodd. ex Lindl. & Paxton

Paxton's Fl. Gard. 2: 109, t.60.1853; Seidenfaden, Opera Bot. 95: 249. 1988; Chowdhery & Pal, Orch. Arunachal Pradesh: 14. 1997; Pradhan & Pradhan, Beaut. Him. Orch.: 30. 1997; Kumar in Pathak *et al.* (ed.), Orch. Sci. & Com.: 111. 2001; Deb *et al.*, J. Orchid Soc. India 17(1-2): 7. 2003; Pearce & Cribb, Orch. Bhutan: 495. 2002. *Aerides fieldingii* B.S. Williams, Orch. Grow. Man. 2.ed.: 39. 1862; Hook.f.,

Fl. Brit. India 6: 45. 1890; Fischer, Rec. Bot. Surv. India 12(2): 135. 1938; Panigrahi, Proc. Nat. Acad. Sci. India Sect. B 36: 127. 1966. *Aerides williamsii* Warner, Sel. Orch. Pl. 1: 21. 1862; Pradhan, Ind. Orch. Guide to Idem. Cult. 2: 546. 1979; Hegde, Orch. Arunachal Pradesh: 71. 1984. *Aerides multiflora* auct. non Roxb. Corom. Pl. 3: 63, t.271. 1820; Dev & Naithani, Orch. Fl. North West Him.: 361, t.205. 1986.

Type: INDIA: Meghalaya (Jaintea Hills), *sine loc.* Loddiges 1530 (holo K-LINDLEY)

Morphological description: Scattered epiphytes with monopodial growth habit. Stem erect 10–15 cm long, 13–15 mm thick, clothed with leaf bases, rooted below. Roots terete, 4–5 mm thick. Leaves strongly arched, deeply channeled, narrow-oblong, slightly tapered to the unequally rounded bifid mucronate apex, fleshy, 12–35 cm long, 16–30 mm wide. Inflorescence one to two per plant, axillary, simple, or with a small (5–9 cm long) branch at the base, arched; peduncle 5.5–13 cm long, 2.5–4 mm thick, with two sheathing tubular and one deflexed brown sterile bract; raceme dense flowered 10–40 cm long, 3.5–4 cm across. Floral bracts oblong-lanceolate, acute, brown, persistent, 4.75 x 2.5 mm. Pedicel and ovary 16 mm long, four-angled, pinkish-white. Flowers pale rose, fragrant, 13.5–20 mm across. Dorsal sepal elliptic-obovate, apiculate, 8 x 5.5 mm, 5-veined; lateral sepals broadly and obliquely ovate, obtuse, 5-veined, 6.5 x 6.5 mm. Petals obovate-oblong, obtuse, 3-veined, 7.5 x 4.4 mm. Lip continuous with the column-foot, immovable, 3-lobed,

Table 1: Key morphological features of *A. multiflora* and *A. rosea*

Feature	<i>A. multiflora</i>	<i>A. rosea</i>
Leaves	Turn purple-red in dry season	No change in colour in dry season
Inflorescence	Pendulous, mostly simple	Arched, simple, or often branched
Pedicel and ovary	5–7 mm long, 3-angled	16 mm long, 4-angled
Flower	Perianth purplish white with purple-pink blotches; lip purple-pink; inodorous	Perianth pale rose; pleasantly fragrant
Lip midlobe	Cordate, apex truncate, rounded	Triangular, apex sub-acute
Spur	Back wall right-angled	Back wall stretched forward in a slope